CIP White Paper

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Section 1 - Overview

Seattle Public Utilities (SPU) is responsible for maintaining the network of sewer and drainage systems throughout the City of Seattle. The system includes approximately:

- 448 miles of sanitary sewers
- 460 miles of storm drains
- 968 miles of combined sewers
- 68 pump stations
- 90 permitted combined sewer overflow outfalls
- 342 storm drain outfalls
- 130 stormwater quality treatment facilities
- 145 flow control facilities
- 38 combined sewer overflow control detention tanks/pipes

The Drainage and Wastewater CIP is the vehicle for maintaining, upgrading, and expanding this infrastructure, as well as constructing projects that protect, conserve, and enhance the city and region's environmental resources. Planned spending in the Drainage and Wastewater Fund (DWF) CIP is approximately $576 million over the next six years.

Historically, the Drainage and Wastewater CIP has been funded primarily by revenue bonds serviced by ratepayers. However, DWF financial policies adopted in 2003 gradually increased cash contributions from the Utility to fund the CIP. By 2007, 25% of total CIP costs were funded by a cash contribution, with the remaining capital needs being debt financed. Overhead costs for the CIP are budgeted in the SPU operating fund and are reimbursed as CIP expenditures are incurred. In late 2010 DWF rates were passed by Council for the two-year period of 2011 and 2012. The next rate proposal will be presented in mid-2012 for 2013 and beyond.

Section 2 - Summary of Upcoming Budget Issues and Challenges

The Drainage and Wastewater CIP must address the challenge of managing large priority projects while still accomplishing Mayoral and Council priorities and complying with U.S. Environmental Protection Agency and Washington State Department of Ecology National Pollutant Discharge Elimination System (NPDES) permits - all within the financial limitations of the fund.

The City of Seattle's most recent NPDES permit for stormwater, granted by the State government in 2007, introduced more prescriptive requirements to help to protect local waterways and Puget Sound from damaging pollutants and excessive runoff. This increasing regulatory emphasis on protecting and improving water quality has resulted in the need for the City of Seattle to make substantial investments in detention, treatment and green stormwater infrastructure over the next 15 years. Detention is the storage of stormwater during a rainfall event, and can be accomplished through detention ponds or underground tanks or through infiltration into the ground. Detention can be added to the drainage system to offset the impacts of larger storms that can overwhelm the conveyance capacity of the system

and result in backups of sewage, localized flooding and releases of untreated sewage. Treatment is the removal of pollutants and can be accomplished through infiltration or the use of technology such as specialized media filters. Green stormwater infrastructure is the use of environmentally friendly and less capital intensive solutions to help reduce overflows by allowing stormwater to infiltrate slowly into the ground and cutting the volume of stormwater entering the system. Green stormwater infrastructure includes specific treatments that rely on specialized soils and plants that provide flow control and/or water quality benefits. The use of green stormwater infrastructure is required through Seattle's NPDES permit and Stormwater Code.

CIP funding is also needed to maintain and improve the existing drainage systems so that residents experience less flooding and fewer sewage backups. Sewer backups are prohibited and considered by regulators to be a violation of the City's federal permits. Prudent investment in capital projects and maintenance moves SPU closer to meeting this standard, and this performance level benefits ratepayers by avoiding costly fines and damages.

The Combined Sewer Overflow (CSO) Reduction Program constitutes one of the major investments and challenges for the Drainage and Wastewater Fund in upcoming years. During heavy rains, the combination of stormwater (about 90 percent of the volume) and sewage may exceed the capacity of the drainage system and overflow into local waterways, causing a combined sewer overflow. Annual overflows have been reduced from roughly 30 billion gallons per year in 1970 to less than 100 million gallons per year typically today. However SPU is still not meeting regulatory mandates limiting overflows to one overflow per outfall location per year. Implementation of the CSO Reduction Program is a state and federal regulatory requirement, and SPU expects to spend approximately $160-$170 million over the next five years (2011-2015) on CSO reduction projects. The projects will include a combination of underground storage tanks, green stormwater infrastructure, system retrofits, and the development of a long-range plan for CSO projects to be constructed from 2016-2025. One of the biggest challenges for the program is siting wastewater facilities in a dense urban environment. SPU is addressing that challenge through an early and active community/stakeholder involvement process on each of its projects. Another challenge revolves around SPU's relationship with King County and maintaining an active partnership to operate the wastewater system and plan for potential joint CSO reduction projects.

CSOs spill a mixture of raw sewage and stormwater into local waterways at 92 outfalls throughout the City of Seattle. Although expensive, improving the system to prevent overflows is important. These spills violate water quality standards, raise public health concerns, and contaminate sediment and habitat for endangered species. State and federal law require SPU to achieve control of CSOs by 2025 through a Long Term Control Plan to be completed by 2015. SPU must also achieve significant permit milestones for the control of CSOs to Lake Washington by December 30, 2015. Most recently, the U.S. Department of Justice on behalf of the U.S. Environmental Protection Agency and Washington Department of Ecology issued a draft consent decree describing measures U.S. Justice will require of SPU to remedy violations of the Clean Water Act. The proposed consent decree includes, among other significant requirements, completion of a Long Term Control Plan by 2015 and control of all CSOs by 2025. Continuing investments in CSO control will enable SPU to meet current permit requirements including preparation of a Long Term Control Plan, accomplish required milestones to control CSOs into Lake Washington and achieve compliance with the 2025 goal.

The Drainage and Wastewater CIP must also ensure that basic service level programs such as flooding and system capacity are not stripped of funding as regulatory requirements continue to grow. The

separated drainage and wastewater system is at capacity during storm events at various locations across the City. The impacts range from very serious (basement sewer back-ups) to nuisance (limited street or yard flooding). SPU is moving forward to address the highest priority locations with capital improvements using available funding and staff resources. These highest priority projects include the Madison Valley Long Term Solution, North 107th Street and Midvale Avenue North Drainage, South Park Stormwater Pump Station, and Broadview Sewer and Stormwater Improvements projects.

- Over the past several decades, there have been a number of instances of flooding and sewer back-ups in Madison Valley during times of heavy rainfall. Storm events that hit the city and the Madison Valley neighborhood in 2004 and 2006 were especially severe, causing some residents to have up to five feet of water in their basements and flooding in their backyards. The Madison Valley Long Term Solution project will provide stormwater flood control facilities to greatly reduce the potential for flooding in the Madison Valley area, especially in the vicinity of 30th Ave East and East John Street, and in the area of 29th Avenue East and East Madison Street. Work includes construction of a large stormwater pipe in the northwest section of the Madison Valley basin, a new stormwater storage facility in Washington Park, and an expanded stormwater retention area at 30th Avenue East and East John Street.

- The South Park Pump Station project will construct a pump station and water quality facility in South Park. The pump station will allow the existing storm drain trunk to meet the level of service adopted in the 2004 Comprehensive Drainage Plan. In turn, this allows for future projects to expand the collection system to address flooding complaints. The water quality facility will treat most stormwater flows from the basin, reducing pollutant loading to the Duwamish River. The project's engineering design is complicated by the tidal flows present in the Duwamish.

- The Broadview neighborhood has experienced capacity-related backups and overflows. The Broadview Sewer and Stormwater Improvements project will test non-traditional solutions to these longstanding issues, with a goal of reducing sewer backups and stormwater flooding in the Broadview basin.

- The North 107th Street and Midvale Avenue North Drainage project includes the design and construction of a three million gallon stormwater detention pond on a 1.8-acre commercial site near North 107th Street and Midvale Ave North. Nearby businesses and homes have started to experience flooding at the five-year storm level. The stormwater facility will provide a 25-year 24-hour storm level of service for nearby businesses and residences.

When making investments in capital facilities that will last decades, it makes financial sense to understand and consider incorporating the potential impacts of climate change on local precipitation and sea levels in Puget Sound. There have been three major storms (2006, 2007, and 2010) in recent years that have resulted in serious drainage and wastewater impacts related to capacity. Scientists indicate that there is a potential that storms will become more intense and more frequent in the near future. This variability requires the utility to have a much more in-depth understanding of how the system functions under different weather conditions. The utility will need to forecast impacts to the stormwater and combined systems on a much more localized level. This type of work will require more fully developed system models than in the past.

Section 3 - Thematic Priorities

Projects in the DWF CIP ensure facilities are properly constructed and maintained, and regulatory requirements are met. Projects in the CIP are also guided by various federal regulations, City policies, long-term plan documents, and the SPU Asset Management Committee (AMC) benefit criteria. Many Drainage and Wastewater CIP projects are outlined in the Wastewater System Plan, Combined Sewer Overflow Reduction Plan, and the Comprehensive Drainage Plan. The Drainage and Wastewater Fund considers three main criteria when prioritizing work: public health and safety, environmental protection/regulatory requirements, and Mayor/Council priorities. Project timing can be influenced by opportunities or requirements to combine construction activity with other projects.

Public Health and Safety: The overriding priority for the Drainage and Wastewater Fund is maintaining public health and safety. This will be accomplished through capital programs and projects including the Madison Valley Long Term Solution and N. 107th Street and Midvale North Drainage projects. The primary Capital program is the sewer and drainage rehabilitation program. This program is focused on identifying and correcting defective or deteriorating infrastructure, including drainage and wastewater pipes, before failure which could result in sewer backups, roadway collapses or landslides.

Environmental Protection/Regulatory Requirements: The City of Seattle/SPU must meet state and federal regulatory requirements in order to comply with the Clean Water Act (CWA). The two most significant regulatory drivers associated with the CWA are the NPDES CSO Permit and the NPDES Stormwater Permit. As required by the NPDES CSO Permit, Seattle developed a 2010 CSO Reduction Plan Amendment to describe the effort to reduce CSOs to the state standard of one overflow per outfall per year. As part of meeting these requirements, SPU will be constructing CSO reduction facilities at Windermere, S. Genesee, and S. Henderson in the coming years. SPU is committed to completing this program by 2025 at an estimated cost of $400 to $500 million.

As part of the NPDES Municipal Stormwater Permit, Seattle is required to have a Structural Stormwater Control Program to address stormwater impacts that are not adequately controlled through other required permit actions. As part of meeting this requirement, SPU will be constructing stormwater water quality and flow control facilities including Norfolk and South Park Water Quality facilities, the N. 107th Street and Midvale North Drainage project, Capitol Hill Water Quality Facility, and Broadview sewer system improvements.

Mayor/Council Priorities: Projects in the six-year CIP that address Mayor and/or Council priorities include the Venema Natural Drainage System (NDS) and Capitol Hill Water Quality Facility where green stormwater infrastructure will be used to reduce stormwater impacts while contributing to meeting sustainability goals. The Venema NDS project will construct natural drainage elements including large bioretention swales and permeable pavement in alleys. A swale is a specially designed area where stormwater can infiltrate into or through the ground or vegetation, depending on whether it is designed primarily for water quality treatment or flow control. The result will be improved stormwater flow control and water quality treatment in the Venema basin which will improve hydrology and water quality in Venema Creek, a tributary of Piper's Creek.

The Capitol Hill Water Quality project will construct an innovative regional scale stormwater facility. The facility will include vegetated bioswales which will provide stormwater treatment for a portion of the largest subbasin draining to South Lake Union while providing a vibrant pedestrian-friendly streetscape. This project will be constructed in partnership with an adjacent land developed and includes new sidewalks and road surfaces.

Section 4 - Project Selection Criteria

SPU's capital planners identify candidate CIP projects through an awareness of ongoing planning processes (e.g., comprehensive plans, program plans), external projects and opportunities, and emergencies or other unexpected events that indicate specific investments are possibly recommended. SPU's Asset Management system then provides rigorous analysis of projects, by using a business case process that establishes whether a problem or opportunity is timely and important, and that the proposed solution is superior to alternatives based on a triple bottom line analysis (economic, environmental and social) of life cycle costs and benefits – or is a "must do" project (e.g., required by regulation).

After candidate projects have been identified, SPU prioritizes projects for inclusion in the CIP based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which the project is driven by Federal, State, and Local laws, permit and regulatory requirements, and consent decrees; as well as by legal agreements with public and private parties. Examples of highly ranked projects in this category include the Windermere, South Genesee and South Henderson CSO projects.

- **External Drivers:** SPU's responsiveness to, or engagement with, the projects of other Departments or Jurisdictions, and the specific mandates of the City Council and Mayor. Examples of highly ranked projects in this category include utility relocation and betterments associated with the Alaskan Way Viaduct and Mercer Corridor projects.

- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. Examples of highly ranked projects in this category include the Point Sewer Pipe Rehabilitation and Emergency Rehabilitation programs.

- **Level of Service:** The importance of this project in providing or improving services to customers. Examples of highly ranked projects in this category include the South Park Pump Station, Localized Flood Control program, Sanitary Sewer Overflow Capacity program, Point Sewer Pipe Rehabilitation, and Emergency Rehabilitation programs.

- **Other Factors:** Other important factors, such as whether a project has social or environmental benefits not otherwise captured; is already in progress or near completion; represents a limited time opportunity; has community visibility, or has outside funding. Examples of highly ranked projects in this category include the N. 107thand Midvale Drainage project (part of the Densmore Basin Drainage Improvements program) and the Long Term Control Plan.

Every project is rated against each criterion; criteria ratings are then considered in determining an overall project priority ranking, using expert judgment. Priority rankings for the CIP are determined by the leads for each Line of Business, with review by key internal stakeholders. The ranking scheme and criteria are the same for all Lines of Business, and are approved by the SPU Director and Asset Management Committee.

Project priority rankings are used to clarify and document which projects are most important and why, to help determine which projects will be included, excluded or deferred from the CIP, and which projects should receive priority attention if a staff or financial resource constraint should arise. This

process can also result in project scope changes, as more cost-effective approaches to meeting the business need are identified. In recent years, given financial constraints, SPU has made difficult choices to eliminate, defer and/or reduce projects in order to support the highest priority projects. Projects that were eliminated include Small Sewer Improvements, Bitter Lake/North 137th Stormwater, Taylor Creek Fish Habitat Improvements, and Fish Passage Program. Projects that were deferred include Sewer Full Line Replacements and Taylor Creek Culvert Replacement. A number of projects were also reduced, including Pump Station and Force Main Improvements, No-Dig and Pipe Maintenance Rehabilitation, Localized Flood Control, Operations Control Center, Operational Facility-Construction and Operational Facility-Other. Funding for some of these projects (Localized Flood Control in particular) has since been re-instated, as resources have become available.

Section 5 - Aligning Infrastructure with Planned Growth

The Capitol Hill Water Quality Facility will be located in the South Lake Union Urban Center and leverages the opportunity to team with private development during redevelopment to incorporate a regional stormwater treatment facility while increasing green space in the right of way. Additionally, the 9th Avenue Sewer Improvement project addresses capacity limitations within this same urban center. For the future, SPU is currently developing a system characterization process that will improve the staff's understanding of growth areas and impacts to the drainage and wastewater system. The 2006 wastewater capacity plan has identified 19 capacity constrained areas based on a five-year service level that will need further analysis to determine the appropriate capital investment.

Section 6 - Future Projects/What is on the Horizon

The Drainage and Wastewater Fund CIP will increase significantly over the next few years. This upward trend reflects progress toward meeting regulatory requirements and commitments outlined in the Combined Sewer Overflow Reduction Plan. The six-year CIP includes significant investments for the Windermere, South Genesee, and South Henderson CSO reduction projects, which will have significant impacts on future rate proposals. Additionally, increases totaling approximately $10 million in 2013 compared to the Endorsed Budget represent shifting costs from 2011 and 2012 for the South Park Pump Station and Thornton Confluence Improvements projects due to delays. All of these issues will be considered in more detail during the development of the rate proposal for 2013 and beyond.

The six-year CIP also includes funding for the Long Term Control Plan, which will identify all remaining CSO projects throughout the City to achieve the Washington State requirement to reduce CSOs down to an average one untreated CSO per year per outfall. Funding to address those remaining CSO projects will need to be included in future CIP budget submittals. Additionally, water quality requirements for stormwater will likely result in significant increases in capital investment requirements on both new projects and potential retrofits of the existing system.

The programmatic analysis and prioritization currently being done in the Flooding, Sewer Back-up, and Landslides business area will result in a comprehensive list of small to large CIP projects to be constructed over the next 15 to 20 years. Projects will be similar to current projects such as Midvale detention, Broadview sewer system improvements and the South Park Pump Station.

Additional stormwater and CSO facilities, both structural and green, will require growing levels of O&M support for inspection and maintenance.

Section 7 - CIP Revenue Sources

SPU's Drainage and Wastewater CIP is funded largely by Drainage and Sewer ratepayers. SPU issues bonds, serviced by ratepayers that cover approximately 75% of the CIP, with the remainder funded by cash. SPU also actively seeks grants and low interest loans. Recently awarded grants include three $1 million grants from the Washington State Department of Ecology's 2011 Stormwater Retrofit Low Impact Development (SWRLID) Competitive Grants Program. These grants will help fund construction of the Venema Creek Natural Drainage System, Capitol Hill Water Quality, and South Park Pump Station projects.

In late 2010 DWF rates were passed by Council for the two-year period of 2011 and 2012. The next rate proposal will be presented in mid-2012 for 2013 and beyond.

Section 8 - CIP Spending by Major Category

CIP Spending by Major Category – 2012-2017 Proposed CIP
(Amounts are in thousands of dollars)

Drainage and Wastewater Fund	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
PROTECTION OF BENEFICIAL USES	$4,800	$6,135	$2,798	$2,702	$4,748	$2,617	$23,799
SEDIMENTS	$5,595	$2,102	$1,457	$1,207	$1,205	$1,205	$12,772
COMBINED SEWER OVERFLOWS	$26,888	$53,217	$29,496	$35,961	$37,248	$21,397	$204,207
REHABILITATION	$12,623	$14,388	$13,965	$14,681	$15,045	$15,341	$86,042
FLOODNG, SEWER BACKUP and LANDSLIDES	$24,186	$26,294	$19,210	$18,283	$18,678	$24,622	$131,275
SHARED COST PROJECTS	$14,931	$13,289	$12,571	$11,141	$15,979	$14,999	$82,910
TECHNOLOGY	$4,815	$7,331	$7,551	$5,302	$4,737	$4,788	$34,524
Total	**$93,838**	**$122,756**	**$87,048**	**$89,277**	**$97,640**	**$84,969**	**$575,528**

Protection of Beneficial Uses: This program makes improvements to the City's drainage system to reduce the harmful effects of stormwater runoff on creeks and receiving water bodies by improving water quality and protecting or enhancing creek habitat. The program includes projects to meet regulatory requirements. Funding in 2012 and 2013 will be focused on two cost effective stormwater projects: the Venema Creek Natural Drainage System project and the Capitol Hill Water Quality project. Both of these projects were cancelled in 2009 due to financial constraints, but have since been re-instated as resources became available. Capital funding is also included to support the Street Sweeping for Water Quality project, which was initiated in 2011 and will reduce the amount of pollution that flows from roadways through SPU infrastructure into local creeks, Lake Washington, and Puget Sound.

Decreases in the **Protection of Beneficial Uses BCL** in 2012, compared to amounts endorsed for 2012 in the 2011-2016 CIP, are primarily the result of the Venema Creek Natural Drainage System project. Schedule delays driven by community and design concerns, as well as additional work being done to

address these issues, have shifted costs from 2011 and 2012 to 2013. The Capitol Hill Water Quality project also contributes to slight increases in both years.

Sediments: The City of Seattle is named as a potentially responsible party for the Duwamish River Superfund Site because of alleged contamination of sediments in the river from CSO and storm drain discharges. The City continues to work with the Washington State Department of Ecology, King County, and other potentially responsible parties on an assessment of contaminants and sources. The Sediments program provides funding for preliminary studies and analysis for cleanup of contaminated sediment sites in which the City is a participant, for actual cleanup of contaminated sites, for preliminary engineering for future cleanup efforts, and for liability allocation negotiations. Funding is used to develop studies and analyses required by regulatory agencies for determining the boundaries and cleanup requirements for specific action sites. The study phase of sediment remediation projects often requires multiple years before specific cleanup actions are defined. As regulatory agency cleanup requirements become clear, additional individual cleanup projects are included in subsequent CIP proposals.

Increases in the **Sediments BCL** for 2012, compared to amounts endorsed for 2012 in the 2011-2016 CIP, reflect the latest schedule and estimates based on negotiations and agreements between parties for proposed actions needed.

Combined Sewer Overflows: This program consists of projects that are mandated by state and federal regulations to control CSOs into the City's receiving waters. Projects include large infrastructure projects (e.g., storage structures, pipes, tunnels, wet weather treatment plants, stormwater separation, pump stations, etc.), smaller retrofits, construction of green infrastructure for CSO control, and development of regulatory required plans such as the Long-Term Control Plan. Key projects in the 2012 Budget include the Windermere, S. Genesee and S. Henderson CSO projects. When completed, these projects will result in cutting CSO volumes into Lake Washington by about 14 million gallons per year, a reduction of approximately 60 percent from current overflows. Starting in 2013, the Combined Sewer Overflows BCL will increase significantly. This upward trend reflects progress toward meeting regulatory requirements and commitments outlined in the Combined Sewer Overflow Reduction Plan.

Compared to amounts endorsed for 2012 in the 2011-2016 CIP, the **Combined Sewer Overflows BCL** is increasing. Increases totaling $1.1 million in 2012 reflect revisions to the cash flow and schedules for the Windermere, S. Genesee and S. Henderson CSO projects. Increases for Windermere are the result of accelerating construction; during the design phase it was discovered that the construction period could be reduced from 24 months to less than 18 months, resulting in fewer impacts to the community and potential cost savings. The result is a $10 million increase for this project compared to the Endorsed Budget in 2013, followed by a $12 million decrease in 2014. The original estimates for Genesee were based on high-level planning work, and have been refined to reflect the chosen alternative. The need for additional mitigation work has also contributed to higher costs.

Rehabilitation: This program consists of projects to rehabilitate or replace existing drainage and wastewater assets in-kind to maintain the current functionality level of the system. Projects include pump station structures, major mechanical and electrical components, and force mains; control structures and appurtenances; and pipes and culverts. Individual projects are defined by the type and method of rehabilitation and/or replacement and include emergency rehabilitation, no-dig pipe and maintenance rehabilitation, point sewer pipe rehabilitation by crews, and point sewer pipe rehabilitation by contract.

Increases in the **Rehabilitation BCL** for 2012, compared to amounts endorsed for 2012 in the 2011-2016 CIP, are driven by the Pump Station and Force Main Improvements program. Delays to the start of the inspection program have impacted the number of force main replacement projects that will be completed this year, resulting in increases to support additional force main projects in 2012. Capital funding totaling $510,000 in 2012 and $1 million in 2013 is also proposed for the Outfall Rehabilitation Program. This work will start in 2011 as part of the No-Dig program, but will be split out as a separate program for better tracking and budgeting in 2012. This program will design and construct CSO outfall improvements that SPU has committed to completing by 2015 per the 2010 NPDES Waste Discharge Permit with the Department of Ecology.

Flooding, Sewer Back-up, and Landslides: This program is responsible for preventing and alleviating flooding and sewer backups in Seattle, with a primary focus on the protection of public health, safety, and property. The program area is focused on planning, design, and construction of channels, pipes, roadside ditches, culverts, detention ponds, and natural drainage systems that control and/or convey storm runoff to receiving bodies. This program also involves protecting SPU drainage and wastewater infrastructure from landslides and providing drainage improvements where surface water generated from the City right-of way is contributing to landslides.

Increased funding for the **Flooding, Sewer Back-up, and Landslides BCL** in 2012 compared with amounts endorsed for 2012 in the 2011-2016 CIP will help fund two priority projects that have been delayed from 2011. Continued difficulties in procuring adjacent private and right-of-way property rights as well as investigation of soil contamination issues has delayed construction for the South Park Pump Station project until 1st Quarter 2012. Construction for the Thornton Creek Confluence project has been delayed until 2013, primarily due to staffing issues. Increases to these projects are partially offset by reductions to the Localized Flood, Sanitary Sewer Overflow Capacity, and Inflow/Infiltration programs, which can be ramped up or down depending on capacity and priorities within the Flooding, Sewer Back-up, and Landslides BCL. Funding from these programs is also being shifted to support the new Broadview Long Term Plan project. This project aims to restore sanitary sewer system capacity in the Broadview neighborhood, which suffers from numerous sewer backups into residences during wet weather events.

Shared Cost Projects: This program includes individual capital improvement projects which typically benefit multiple lines of business (e.g., the Water line of business and the Drainage and Wastewater line of business) and whose costs are "shared," or paid for, by more than one of SPU's utility funds. In 2012 the Drainage and Wastewater program includes funding for a number of interdepartmental projects including the Alaskan Way Viaduct and Seawall Replacement, Mercer Corridor and Bridging the Gap projects. Funding is also included for SPU's Heavy Equipment Purchases, the Integrated Control Monitoring Program and a number of smaller projects.

Reductions in the **Shared Cost Projects BCL** for 2012, compared to amounts endorsed for 2012 in the 2011-2016 CIP, are driven by the Alaskan Way Viaduct (AWV) and Integrated Control Monitoring (I-SCADA) programs. The proposed budget for AWV reflects the latest schedule and more refined cost estimates, which includes design in 2011 for the seawall and bored tunnel portals and associated utility relocation, followed by construction in 2012. I-SCADA reductions in 2012 and 2013 are the result of work being accelerated to 2011; funding is available due to delays to the South Park Pump Station and Thornton Confluence projects.

Technology: This program category is presented in the separate "Technology CIP" section of SPU's 2012-2017 Proposed CIP. The 2012-2017 Proposed CIP reduces technology CIP spending by 10% annually, which is equivalent to a $1.37 million reduction compared to the 2012 Endorsed Budget in the 2011-2016 Adopted CIP. The Drainage and Wastewater Utility's share of the 2012 Technology CIP reduction is 14% or $186,000 based on the Drainage and Wastewater Utility's share of benefit from these projects. SPU will focus technology spending on the highest priority business needs. These include utility asset management (Maximo Upgrade/Asset Data Initiative), budget and financial management (Budget Planning and Forecasting, Financial Data Mart), customer service improvements (Web Application Redesign, online chat and contact tools), and project delivery (Enterprise Project Management System). Other technology investments will be cancelled or deferred as a result of this funding reduction, which is part of a set of initiatives intended to continue restraining costs across the utility.